

LINE REFLECTION REDUCTION WITH ENERGY-RECOVERY DRIVER10776927
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[0001] The invention was made with government support under DAAL01-95-K-3528 sponsored by DARPA and MDA904-93-C-L042 sponsored by DOD. The government has certain rights in the invention.

CROSS-REFERENCE TO RELATED APPLICATION

[0002] This application is a continuation of Application Serial No. 10/270,851, filed October 14, 2002, ^{is now a U.S. Patent 6,696,853} entitled "Line Reflection Reduction with Energy-Recovery Driver," which is a continuation of Application Serial No. 09/532,798, filed March 21, 2000, ^{is now a U.S. Patent 6,486,697} entitled "Line Reflection Reduction with Energy-Recovery Driver," the contents of which are incorporated herein by reference.

[0003] Application Serial No. 09/532,798 claimed the benefit of U.S. Provisional Application No. 60/125,580, filed March 22, 1999, entitled "Line Reflection Cancellation with Energy-Recovery Driver," the contents of which are incorporated herein by reference.

BACKGROUND OF THE INVENTION**[0004] 1. Field of the Invention**

[0005] This invention relates to line drivers and, more particularly, to techniques for reducing ringing and power losses in line driving systems.

[0006] 2. Description of Related Art

[0007] Line reflection decreases the noise margin in high-speed digital circuits, especially line reflections induced by signal buffers driving off-chip loads.

[0008] The signal buffer acts as a line driver. After the driver causes a signal transition, the transition travels from the source (near) end of the transmission line to the load (far) end. Upon reaching the end, the signal transition is usually reflected at the far end and travels back toward the source. The reflected signal is then usually again reflected upon reaching the source back towards the load. This